




# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/915,382	07/27/2001	Ilkka Niva	367.40363X00	8873
20457	7590	11/19/2004		
ANTONELLI, TERRY, STOUT & KRAUS, LLP 1300 NORTH SEVENTEENTH STREET SUITE 1800 ARLINGTON, VA 22209-9889			EXAMINER AGHDAM, FRESHTEH N	
			ART UNIT 2631	PAPER NUMBER

DATE MAILED: 11/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>		<b>Applicant(s)</b> 	
	09/915,382		NIVA ET AL.	
	<b>Examiner</b>		<b>Art Unit</b>	
	Freshteh N. Aghdam		2631	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 27 July 2001.  
 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.  
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
 6) ☒ Claim(s) 1-11 is/are rejected.  
 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.  
 10) ☒ The drawing(s) filed on 27 July 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☒ All    b) ☐ Some \*    c) ☐ None of:  
         1. ☒ Certified copies of the priority documents have been received.  
         2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
         3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
     \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>07/27/01</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Drawings***

The disclosure is objected to because of the following informalities:

In figure 3, the cited received signal 31 in the specification (Pg. 6, Lines 25-30) is cited 301.

In figure 3, the cited finger position information 311-313 in the specification (Pg. 8, Lines 14-15) is cited 311-314.

Appropriate corrections are required.

### ***Specification***

The disclosure is objected to because of the following informalities:

In the specification of the application (Pg. 7, Line 1), the matched filter 303 according to figure 3 is cited matched filter 400.

Appropriate correction is required.

### ***Claim Objections***

Claims 2- 8, 10, and 11 are objected to because of the following informalities:

Since the cited claims are dependent claims depending on claims 1 or 9 the letter "A" should be replaced by "The".

Appropriate correction is required.

## ***Claim Rejections - 35 USC § 112***

Art Unit: 2631

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

Claims 4-7, 10, and 11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 4 and 10 recite the limitation "the time difference" in line 2. There is insufficient antecedent basis for this limitation in the claim.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 8, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over La Rosa (US Patent 6,078,611).

As to claims 1 and 9, La Rosa teaches a rake receiver having at least two fingers, which receives, samples, jointly tracks, and determines the delay between a signal and at least one of its delayed versions (Fig. 2; Fig. 5; Col. 4, Lines 3-12; Col. 5, Lines 16-19; and Col. 6, Lines 15-21; Col. 7, Lines 44-50). Furthermore, the delay between the received signal and its delayed version is compared to a predetermined threshold (Fig. 3, Block 314) and if the delay is less than the predetermined threshold (Fig. 3, Block 316) then the signal and its delayed version are tracked jointly (Fig. 3,

Art Unit: 2631

Block 316) using the time tracking circuit according to figure 2 which adjusts the time tracking method for both the signal and its delayed version (Fig. 3; Col. 6, Lines 35-47). La Rosa, however, doesn't specifically teach if the delay is less than the threshold to track only the delayed version of the signal. However, La Rosa teaches tracking both fingers jointly based on the result of threshold detection. One skilled in the art would clearly recognize to use the teaching of La Rosa in order to track one finger based on the result of the threshold. Therefore, it would have been obvious to one ordinary skilled in the art at the time that the invention was made to apply the teaching of La Rosa to control the position of two adjacent fingers in order to prevent convergence of two or more fingers about a common time position (Abstract).

As to claim 8, La Rosa discloses detecting the delay between the signal and its delayed version by determining the correlation between the received signals and a predefined PN code (Fig. 1; Col. 4, Lines 25-27).

Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over La Rosa as applied to claim 1 above, and further in view of Murai (US Patent 6,154,487).

As to claim 2, La Rosa discloses all of the subject matters claimed above (Fig.8, Block 830; early or late time adjustment) except for the details of tracking methods used to track the fingers. Murai discloses in the same field of endeavor a tracking method, which tracks 0.5 chip before the proper timing (i.e. on time; Fig. 20; Col. 7, Lines 3-5). From teaching of Murai, one skilled in the art would clearly recognize that the first tracking method tracks the rising edge. Therefore, it would have been obvious to one

Art Unit: 2631

ordinary skilled in the art at the time the invention was made to combine the teaching of Murai with La Rosa to track the signal and its delayed version based on the disclosure of Murai on early time adjustment in order to adjust a phase offset of the PN code.

As to claim 3, La Rosa discloses all of the subject matters claimed above (Fig.8, Block 830; early or late time adjustment) except for the details of tracking methods used to track the fingers. Murai discloses in the same field of endeavor a tracking method, which tracks 0.5 chip away from the proper timing (i.e. on time; Fig. 20; Col. 7, Lines 3-5). From teaching of Murai, one skilled in the art would clearly recognize that the second tracking method tracks the falling edge. Therefore, it would have been obvious to one ordinary skilled in the art at the time the invention was made to combine the teaching of Murai with La Rosa to track the signal and its delayed version based on the disclosure of Murai on late time adjustment in order to adjust a phase offset of the PN code.

### ***Allowable Subject Matter***

Claims 4-7, 10, and 11 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims and rewritten to overcome any objections.

### ***Conclusion***

Art Unit: 2631


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Freshteh N. Aghdam whose telephone number is (571) 272-6037. The examiner can normally be reached on Monday through Friday 10:00-6:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad Ghayour can be reached on (571) 272-3021. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Freshteh Aghdam

November 1, 2004

  
MOHAMMED GHAYOUR  
SUPERVISORY PATENT EXAMINER

\*\*\*